

CLAIMS

What is claimed is:

- 5 1. A method for acknowledging a wireless data discarding request transmitted by a first station to a second station for requesting the second station to discard at least a layer 2 service data unit (SDU), the method comprising:
generating a layer 2 data discard acknowledgment protocol
10 data unit (PDU), the layer 2 data discard acknowledgment PDU comprising a first field that enables the first station to determine layer 2 SDUs discarded by the second station; and
transmitting the layer 2 data discard acknowledgment PDU
15 to the first station.
2. A method according to claim 1 wherein each layer 2 SDU to be discarded has a terminating layer 2 PDU that holds a terminating end of the layer 2 SDU, and the first field
20 indicates the number of terminating layer 2 PDUs discarded by the second station.
3. A method according to claim 1 wherein the first field indicates the number of layer 2 SDUs discarded by the second
25 station.
4. A method according to claim 1 wherein the first field indicates the number of layer 2 PDUs discarded by the second station when discarding the layer 2 SDUs.
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5. A method according to claim 1 wherein the first field comprises a bitmap that indicates a discard state for each

layer 2 SDU to be discarded.

6. A method according to claim 1 wherein the layer 2 data discard acknowledgement PDU further comprises a second field
5 for indicating a starting sequence number for an updated receiving window of the second station, and a third field for indicating discarding of layer 2 SDU data within a PDU having the starting sequence number.
- 10 7. A method according to claim 1 wherein the first station comprises a layer 2 interface and a layer 3 interface, and the first field in the layer 2 acknowledgment PDU enables the layer 2 interface to inform the layer 3 interface of the number of layer 2 SDUs discarded by the second station.
- 15 8. A wireless communications system comprising:
a first station capable of transmitting a data discarding request, the data discarding request being used to request discarding of at least a layer 2 service data unit (SDU); and
20 a second station capable of receiving the data discarding request and sending a layer 2 data discard acknowledgment protocol data unit (PDU), the layer 2 data discard acknowledgment PDU comprising a first field that enables the first station to determine layer 2 SDUs discarded by the second station.
- 25 9. A wireless communications system according to claim 8 wherein each layer 2 SDU to be discarded has a terminating layer 2 PDU that holds a terminating end of the layer 2 SDU, and the first field indicates the number of terminating layer 2 PDUs discarded by the second station.

10. A wireless communications system according to claim 8 wherein the first field indicates the number of layer 2 SDUs discarded by the second station.

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11. A wireless communications system according to claim 8 wherein the first field indicates the number of layer 2 PDUs discarded by the second station when discarding the layer 2 SDUs.

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12. A wireless communications system according to claim 8 wherein the first field comprises a bitmap that indicates a discard state for each layer 2 SDU to be discarded.

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13. A wireless communications system according to claim 8 wherein the layer 2 data discard acknowledgement PDU further comprises a second field for indicating a starting sequence number for an updated receiving window of the second station, and a third field for indicating discarding of layer 2 SDU
20 data within a layer 2 PDU having the starting sequence number.

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14. A wireless communications system according to claim 8 wherein the first station comprises a layer 2 interface and a layer 3 interface, and the first field in the layer 2 data
25 discard acknowledgment PDU enables the layer 2 interface to inform the layer 3 interface of the number of layer 2 SDUs discarded by the second station.

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